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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/638,265	08/15/2000	Yoshihiro Ishikawa	3815/96	1100

7590   07/20/2004

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EXAMINER
IQBAL, KHAWAR

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 07/20/2004 $/5$

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5,7,12</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1, 9 and 10 are objected to because of the following informalities: The use of

"and/or" makes the claim indefinite since the slash mark means either "and" or "or".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-17 are rejected under 35 U.S.C. 102(b) as being unpatentable by

Gunmar et al (5293640).

3.   Regarding claim 1 Gunmar at al teaches a communication performance

calculation method in a mobile communication system which includes a plurality of base

stations and a plurality of mobile stations for carrying out communication with the base

stations, wherein an area where the mobile stations are distributed is divided into a

plurality of subdivisions, said communication performance calculation method

comprising (figs. 1,2,8 abstract):

        a transmission power data storing step of storing transmission power data of the

base stations corresponding to the subdivisions and/or of the mobile stations visiting the

subdivisions (col. 6, lines 30-45); a traffic intensity data storing step of storing traffic

intensity data of the subdivisions (col. 6, lines 30-45, col. 7, lines 7-25); a traffic

calculating step of calculating a mean and variance of applied traffic at the base stations

(col. 6, lines 58-67, col. 7, lines 7-25, col. 4, lines 25-50); and a communication

performance calculating step of calculating communication performance from the mean

and variance (col. 6, lines 58-67, col. 7, lines 7-25, col. 4, lines 25-50).

Regarding claim 9 Gunmar at al teaches a computer readable recording medium

storing a program causing a computer to execute a communication performance

calculation method in a mobile communication system which includes a plurality of base

stations and a plurality of mobile stations for carrying out communication with the base

stations, wherein an area where the mobile stations are distributed is divided into a

plurality of subdivisions, said communication performance calculation method

comprising (figs. 1,2,8): a transmission power data storing step of storing transmission

power data of the base stations corresponding to the subdivisions and/or of the mobile

stations visiting the subdivisions (col. 6, lines 30-45, col. 10, lines 29-41); a traffic

intensity data storing step of storing traffic intensity data of the subdivisions (col. 6, lines

30-45); a traffic calculating step of calculating a mean and variance of applied traffic at

the base stations; and a communication performance calculating step of calculating

communication performance from the mean and variance (col. 6, lines 58-67, col. 7,

lines 7-25, col. 4, lines 25-50).

Regarding claim 10 Gunmar at al teaches a communication performance

calculation apparatus in a mobile communication system which includes a plurality of

base stations and a plurality of mobile stations for carrying out communication with the

base stations, wherein an area where the mobile stations are distributed is divided into

a plurality of subdivisions, said communication performance calculation apparatus

comprising (figs. 1,2,8): transmission power data storing means for storing

transmission power data of the base stations corresponding to the subdivisions and/or

of the mobile stations visiting the subdivisions; traffic intensity data storing means for

storing traffic intensity data of the subdivisions (col. 6, lines 30-45); traffic calculating

means for calculating a mean and variance of applied traffic at the base stations; and

communication performance calculating means for calculating communication

performance from the mean and variance (col. 6, lines 58-67, col. 7, lines 7-25, col. 4,

lines 25-50).

Regarding claims 2,11 Gunmar at al teaches a first calculating step of

calculating, from the transmission power data of the mobile stations stored in the

transmission power data storing step, received power at the base stations of signals

sent from the mobile stations to the base stations; and a second calculating step of

calculating, from the traffic intensity data stored in the traffic intensity data storing step

and the received power, the mean and variance of the applied traffic at the base

stations (Col. 6, lines 35-54).

Regarding claims 3,12 Gunmar at al teaches a third calculating step of

calculating the mean and variance of the applied traffic at the base stations from the

transmission power data of the base stations stored in the transmission power data

storing step, and from the traffic intensity data stored in the traffic intensity data storing

step (Col. 6, lines 35-67).

Regarding claims 4,13 Gunmar at al teaches probability calculating step of calculating probability distribution from the mean and variance of the applied traffic; and a probability decision step of calculating a probability that the applied traffic exceeds a predetermined threshold value (col. 7, lines 24-44, col. 6, lines 35-54).

Regarding claims 5,14 Gunmar at al teaches wherein said probability decision step comprises a step of setting acceptable interference power to the base stations or its constant multiple as the threshold value (col. 7, lines 25-44, see above).

Regarding claims 6,15 Gunmar at al teaches wherein said probability decision step comprises a step of setting a sum of acceptable interference power to the base stations or its constant multiple and thermal noise power of receivers in base stations as the threshold value (col. 7, lines 25-44, see above).

Regarding claims 7,16 Gunmar at al teaches a threshold value calculating step of carrying out calculation using a ratio of a sum of acceptable interference power to the base stations or its constant multiple and thermal noise power of receivers in the base stations to thermal noise power of the receivers (col. 7, lines 25-44, see above); and a step of setting a calculation result in the threshold value calculating step as the threshold value (col. 7, lines 25-44, see above).

Regarding claims 8,17 Gunmar at al teaches wherein said probability decision step comprises a step of setting a total sum of maximum transmission powers of the base stations or its constant multiple as the threshold value (col. 7, lines 24-44, col. 6, lines 35-54).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KHAWAR IQBAL whose telephone number is 703-306-

3015.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **BANKS-HAROLD, MARSHA**, can be reached at 703-305-4379.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2684 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application

or proceeding should be directed to the Technology Center 2600 Customer

Service Office whose telephone number is (703) 306-0377.

Khawar Iqbal

CHARLES APPIAH
PRIMARY EXAMINER